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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,800	01/24/2004	Larry S. Eoff	2003-IP-009464U1	1654

7590 09/19/2006  
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EXAMINER
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FIGUEROA, JOHN J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/763,800

Applicant(s)

EOFF ET AL.

Examiner

John J. Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-14, 21 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-14, 21 and 24-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/30/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The double patenting rejections (items 11-17 on pages 6-10 of the Office Action of March 23, 2006, hereinafter 'OA') have been withdrawn in view of the terminal disclaimer filed with Applicant's amendment/response of June 23, 2006, hereinafter 'Response'.
2. The 35 U.S.C. 112, 2<sup>nd</sup> paragraph rejection (item 21 on page 11 of OA) has been withdrawn in view of Applicant's amendment to the claims in Response.
3. The 35 U.S.C. 102(b) rejection of claims 1-5, 10, 12, 14, 21 and 24-29 as anticipated by USPN 4,532,052 to Weaver et al., hereinafter 'Weaver', is maintained for the reasons previously made of record in item 23 on page 11 of OA.
4. The 35 U.S.C. 103(a) rejection of claims 11-14 as unpatentable over Weaver in view of USPN 6,358,889 B2 to Waggenspack et al., hereinafter 'Waggenspack', is maintained for the reasons previously made of record in item 25 on page 13 of OA.

***Response to Arguments***

*The Double Patenting and 35 U.S.C. 112 Rejections (items 11-17 and 21 of OA)*

5. Applicant's arguments in Response with respect to the nonstatutory, obviousness double patenting rejections and to the 35 U.S.C. 112 indefiniteness rejection have been considered but have become moot due to the withdrawal of these rejections.

*The 35 U.S.C. 102 Rejection over Weaver (item 23 of OA)*

6. Applicant's arguments in Response with respect to the 35 U.S.C. 102(b) rejection of claims 1-5, 10, 12, 14, 21 and 24-29 as anticipated by Weaver have been fully considered but are deemed unpersuasive.

Examiner notes that independent claim 1 has been amended to limit the water-soluble relative permeability modifier to comprise a hydrophobically modified water-soluble polymer "capable of" reducing permeability of the subterranean formation to an aqueous-based fluid. [Emphasis added.]

In response to Applicant's argument that Weaver is instead directed to a hydrophobically modified polymer that *increases* permeability of the subterranean formation to aqueous-based fluid, although the cited passage by Applicant does disclose an aspect of Weaver's method of treating a well that uses said polymer to *increase* formation permeability (col. 7, lines 43-52), Weaver further discloses other embodiments of said method involving adding the disclosed hydrophobically-modified polymer to *reduce* permeability to aqueous fluids. See, e.g., Abstract ("[t]reatment of the

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earthen formations with the compositions of this invention can substantially modify the permeability and surface characteristics of the formation *to prevent or reduce the flow of aqueous fluids, especially water and formation brines* through that portion of the formation.”); Col. 7, lines 7-30 (disclosing that “[w]ithin this aspect of the invention, one particular process involves the treatment of particles packed into a formation to *decrease the permeability of the formation to the flow of water or an aqueous fluid*. The process comprises merely placing or contacting a liquid phase adjacent to the formation containing an effective amount of a polymer to treat at least a portion of the adjacent formation. ... The polymer is preferably a branched organic polymer ... with a backbone chain having reactive sites on which a branch chain can be or has been attached with branched chains being attached to the backbone chain .... The branched organic polymer also contains a hydrophilic portion in a concentration sufficient to *produce the desired hydrophilic-hydrophobic balance within the formation and to alter the hydrophilic characteristics in the formation*.”); Col. 9, lines 49-64 (disclosing that “broadly speaking, one preferred application of this invention *comprises one or more processes and polymer compositions for altering the surface characteristics of and/or fluid flow characteristics or a substrate or a formation* which includes contacting said formation with a highly branched organic polymer which has an attaching portion and a modifying portion. ... The modifying portion of said polymer has the hydrophilic-hydrophobic balance desired to produce the desired formation surface characteristics and/or interaction with fluids such as gelling and *increasing or decreasing permeability to certain fluids*.”); Col. 15, line 63 to col. 16, line 2 (teaching that “[g]reater efficiency in

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*reducing water permeability is related to a higher degree of branching and with the higher molecular weight hydrophilic branches and backbone structure. ... However, sufficient open ended branches are necessary to effect the reduction in water production and/or mobility.”*); Procedure I (drawn to a method for evaluating the effectiveness of the branched polymer for reducing “*aqueous fluid flow*” through sand.); Procedure K (reciting a method of determining the branched polymer effectiveness for reducing “*aqueous fluid flow*” through a core.); and Tables 1-8, 10 and 13 (disclosing numerous results showing the reduction of water permeability for various branched polymers).

Consequently, Weaver discloses several embodiments of the method of treating a well bore that comprises providing a branched polymer that (“is capable of”) reducing the permeability of a formation to an aqueous-base fluid albeit Weaver teaching an embodiment (cited by Applicant) that instead increases the permeability to an aqueous fluid.

Moreover, a recitation of an intended use of the claimed invention (capable of reducing surface permeability to an aqueous fluid) must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, Weaver discloses the same hydrophobically modified water-soluble polymers encompassed by the instant claims. Therefore, they must inherently possess the same physical properties, such as their

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capability to reduce formation permeability to an aqueous-based fluid when administered into a well within, e.g., a well servicing fluid.

Thus, the claims, as amended, remain anticipated by Weaver.

*The 35 U.S.C. 103 Rejection over Weaver and Waggenspack (item 25 of OA)*

7. Applicant's arguments in Response regarding the 35 U.S.C. 103(a) rejection of claims 11-14 as unpatentable over Weaver and Waggenspack have been fully considered but are deemed unpersuasive.

Applicant's arguments concerning Weaver were addressed above in item #6. As discussed previously, Weaver does disclose using the branched polymer in a method for treating a well to reduce the formation permeability to an aqueous-based fluid. Thus, Waggenspack need not supply this limitation. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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In the instant case, Applicant's arguments that there is no suggestion to combine the references because Weaver is drawn to an "injection fluid" whereas Waggenspack is drawn only to drilling fluids is inaccurate and misdirectional. Weaver does teach using the disclosed method in *drilling* applications and Waggenspack teaches using the aqueous chitosan composition in well *drilling and servicing* fluids. See, Weaver (col. 7, lines 17-20 and col. 8, lines 48-53); Waggenspack (title; abstract; col. 3, lines 13-24 and col. 3, line 65 to col. 4, line 5)

Moreover, Applicant is apparently actually arguing that the references are nonanalogous art. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In the instant case, as discussed in the immediately preceding paragraph, both references are drawn to drilling fluids and methods of treating (servicing) a well bore.

Thus, the claims, as amended, remain unpatentable over Weaver and Waggenspack.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Mon-Thurs & alt. Fri 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DAVID J. BUTTNER  
PRIMARY EXAMINER

JJF/RAG

A handwritten signature in black ink, appearing to read "David Buttner", is written below the printed name and title.